the motion *upwards*, the ſide *A* will be *depreſt* to *E*, and therefore *C* being thruſt to *G* and *D* to *H*; the *globular* Figure by this means alſo will be made an *Elliptico-ſpherical*. Next if a fluid be included *partly* with one, and *partly* with another fluid, it will be found to be ſhaped *diverſly*, according to the proportion of the *gravity* and *incongruity* of the 3 *fluids* one to another: As in the *ſecond Figure*, let the upper *M M M* be *Air*, the middle *L M N O* be common *Oyl*, the lower *O O O* be *Water*, the *Oyl* will be form'd, not into a *ſpherical* Figure, ſuch as is repreſented by the *pricked Line*, but into ſuch a Figure as L M N O, whoſe ſide L M N will be of a flatter *Elliptical* Figure, by reaſon of the great diſproportion between the *Gravity* of *Oyl* and *Air*, and the ſide L O M of a rounder, becauſe of the ſmaller difference between the weight of *Oyl* and *Water*. Laſtly, The *globular* Figure will be changed, if the *ambient* be partly *fluid* and partly *ſolid*. And here the termination of the incompaſſed *fluid* towards the incompaſſing is ſhap'd according to the proportion of the congruity or incongruity of the *fluids* to the *ſolids*, and of the gravity and incongruity of the *fluids* one to another. As ſuppoſe the ſubjacent *medium* that hinders an included fluids deſcent, be a *ſolid*, as let K I, in the *fourth Figure*, repreſent the ſmooth ſuperficies of a *Table*; E G F H, a parcel of *running Mercury*; the ſide G F H will be more flatted, according to the proportion of the incongruity of the *Mercury* and *Air* to the *Wood*, and of the *gravity* of *Mercury* and *Air* one to another; The ſide G E H will likewiſe be a little more depreſt by reaſon the ſubjacent parts are now at reſt, which were before in motion.

Or further in the *third Figure*, let A I L D repreſent an including *ſolid* medium of a cylindrical ſhape (as ſuppoſe a ſmall *Glaſs Jar*) Let F G E M M repreſent a contain'd *fluid*, as water; this towards the bottom and ſides, is figured according to the concavity of the *Glaſs*: But its upper *Surface*, (which by reaſon of its gravity, (not conſidering at all the Air above it, and ſo neither the congruity or incongruity of either of them to the Glaſs) ſhould be terminated by part of a *Sphere* whoſe diameter ſhould be the ſame with that of the earth, which to our ſenſe would appear a ſtraight *Line*, as F G E, Or which by reaſon of its having a greater congruity to Glaſs than Air has, (not conſidering its Gravity) would be thruſt into a *concave Sphere*, as C H B, whoſe diameter would be the ſame with that of the concavity of the Veſſel:) Its upper Surface, I ſay, by reaſon of its having a greater gravity then the Air, and having likewiſe a greater congruity to Glaſs then the Air has, is terminated, by a *concave Elliptico-ſpherical* Figure, as C K B. For by its congruity it eaſily conforms it ſelf, and adheres to the Glaſs, and conſtitutes as it were one containing body with it, and therefore ſhould thruſt the contained Air on that ſide it touches it, into a *ſpherical* Figure, as B H C, but the motion of Gravity depreſſing a little the Corners B and C, reduces it into the aforeſaid Figure C K B. Now that it is the greater congruity of one of the two *contiguous fluids*, then of the other, to the containing *ſolid*, that cauſes the ſeparating ſurfaces to be thus or thus figured: And that it is not becauſe this or that figurated ſurface is more proper, natural, or peculiar to one

one of theſe fluid bodies, then to the other, will app
ſame *fluids* will by being put into differing *ſolids*,
For the ſame water, which in a Glaſs or wooden
cave ſurface upwards, and will riſe higher in a ſmall
the ſame water, I ſay, in the ſame Pipes greaſed o
duce quite contrary effects; for it will have a *prot*
face upwards, and will not riſe ſo high in ſmall, as i
in the very ſame ſolid Veſſel, you may make the
ous *Liquids* to alter their Surfaces; for taking a ſm
like Veſſel, and pouring water gently into it, you
face of the water all the way *concave*, till it riſe ev
you ſhall find it (if you gently and carefully po
very *protuberant* and *convex*; the reaſon of which
ſolid ſides of the containing body are no longer ext
water does more readily adhere then the air; but
included with air, which would reduce it into a *hem*
of its *gravity*, it is flatted into an *Oval*. *Quickſil*
is more incongruous then *Air* (and thereby being
will not adhere to it, but by the more *congruous air*
a very *protuberant* ſurface, and to riſe higher in
Pipe) this *Quickſilver* to clean *Metal*, eſpecially to
&c. *Iron* excepted, is more *congruous* then *Air*, and
it, but have a *concave* Surface like *water*, and riſe hig
greater Pipe.

In all theſe Examples it is evident, that there i
adventitious force, by which the *globular* Figure of
geneous fluid is altered; neither can it be imagined,
wiſe be of any other Figure then *Globular*: For be
ous fluid equally *protruded* every way, whatſoever p
be thereby *depreſt*. From this cauſe it is, that in
much reſemble a *round Spring* (ſuch as a *Hoop*.) F
there is required an additional *preſſure* againſt two
duce it into an *Oval* Form, or to force it in betwe
whoſe *Diameter* is leſs then that of the *Spring*, ther
ble force or *protruſion* againſt the *concave* or inner ſi
to alter this *ſpherical* conſtitution of an included flui
quired more preſſure againſt oppoſite ſides to reduce
to preſs it into an *Hole* leſs in *Diameter* then it ſelf, it
truſion againſt all the other ſides. What degrees
to reduce them into longer and longer *Ovals*, or to
and leſs *holes*, I have not yet experimentally calcul
by experiment I find in general, that there is alway
preſſure to cloſe them into longer *Ovals*, or protu
holes. The neceſſity and reaſon of this, were it requ
plain: but being not ſo neceſſary, and requiring
then I have for it at preſent, I ſhall here omit it;
that this may be preſently found true, if Experi

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